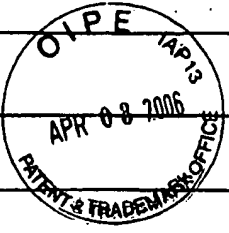


Sheet 1 of 1		INFORMATION DISCLOSURE STATEMENT					
FORM PTO 1449 (modified)  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  LIST OF REFERENCES CITED BY APPLICANT(S) (Use several sheets if necessary)  Date Submitted to PTO: April 3, 2006			ATTY DOCKET NO. 00177/MU-1296/P9558-04		SERIAL NO. 09/244,037		
			APPLICANT Mitsuaki OSHIMA et al.				
			FILING DATE February 4, 1999		GROUP 2634		
U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/DH/	AA	5,018,198	5-21-91	Takahashi			
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EXAMINER				DATE CONSIDERED			
/Dac Ha/				03/06/2007			

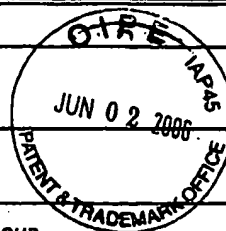
\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include cop. this form with next communication to applicant.

## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)

Date Submitted to PTO: June 2, 2006

ATTY DOCKET NO.  
00177/MU-1296/P9558-04SERIAL NO.  
09/244,037APPLICANT  
Mitsuaki OSHIMA et al.FILING DATE  
February 4, 1999GROUP  
2634

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/DH/	AA	4,003,002	1-11-77	Snijders et al.			
/DH/	AB	4,053,713	10-11-77	Nitadori			
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## FOREIGN PATENT DOCUMENTS

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## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

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DATE CONSIDERED

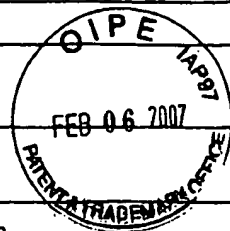
03/06/2007

## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)

Date Submitted to PTO: February 6, 2007

ATTY DOCKET NO.  
00177/MU-1296/P9558-04SERIAL NO.  
09/244,037APPLICANT  
Mitsuaki OSHIMA et al.FILING DATE  
February 4, 1999GROUP  
2634

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
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## FOREIGN PATENT DOCUMENTS

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/DH/	AJ	3-13145	1-22-91	Japan			abstract	
/DH/	AK	4-322592	11-12-92	Japan			abstract	
/DH/	AL	63-253738	10-20-88	Japan			abstract	
/DH/	AM	62-502932	11-19-87	Japan			abstract	
/DH/	AN	58-107740	6-27-83	Japan			abstract	

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

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DATE CONSIDERED

03/06/2007

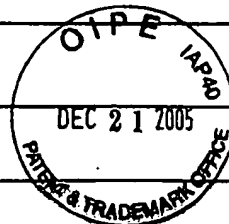
\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)

Date Submitted to PTO: December 21, 2005

ATTY DOCKET NO.  
00177/MU-1296/P9558-04SERIAL NO.  
09/244,037APPLICANT  
Mitsuaki OSHIMA et al.FILING DATE  
February 4, 1999GROUP  
2634

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/DH/	AA	4,597,090	6-24-86	Forney, Jr.			
/DH/	AB	4,077,021	2-28-78	Csajka et al.			
/DH/	AC	2005/0004750	4-21-05	Wang et al.			
/DH/	AD	2005/0058633	3-17-05	Epstein et al.			
/DH/	AE	2005/0922922					
/DH/	AF	4,918,437	4-17-90	Jasinski et al.			
/DH/	AG	5,023,889	6-11-91	Divsalar et al.			
/DH/	AH	5,063,452	11-5-91	Higurashi			
/DH/	AI	5,124,852	6-23-92	Suwa et al.			
/DH/	AJ	5,136,380	8-4-92	Cho			
/DH/	AK	5,146,335	9-8-92	Kim et al.			
/DH/	AL	5,148,422	9-15-92	Sako et al.			
/DH/	AM	5,218,436	6-8-93	Sugiyama et al.			

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
/DH/	AN	2627574	7-21-04	CN			
/DH/	AO	1529838	5-11-05	EP			abstract
/DH/	AP	1499725	5-26-04	CN			only abstract
/DH/	AQ	2004-159207	6-3-04	JP			corresponds to AP
/DH/	AR	1528854	5-11-05	EP			only abstract
/DH/	AS	52118	12-16-02	UA			only abstract
/DH/	AT	1569334	1-26-05	CN			x

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

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Sheet 1 of 1

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)

Date Submitted to PTO: August 24, 2004

ATTY DOCKET NO.  
00177/MU-1298/P9558-04SERIAL NO.  
09/244,037APPLICANT  
Mitsuaki OSHIMA et al.FILING DATE  
February 4, 1999GROUP  
2634

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
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## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
DA	AJ	2-154583	6-13-90	Japan			abstract
	AK						
	AL						
	AM						
	AN						

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

DA	AO	Shigeki MORIYAMA et al., "Delay Propagation Characteristics at VHF and UHF bands in Urban Area", 1991 Spring National Convention Record, The Institute of Electronics, Information and Communication Engineers, Part 2, p. 406, March 15, 1991
DA	AP	Yasuhiro ITO et al., "Adaptive Weighted Code Division Multiplexing (AW-CDM) Transmission System for Terrestrial Digital Television Broadcasting", ITE Technical Report Vol. 17, No. 13, pp 27-32, February 25, 1993
	AQ	

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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include cop. this form with next communication to applicant.

## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
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Date Submitted to PTO: April 11, 2005

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09/244,037APPLICANT  
Mitsuaki OSHIMA et al.FILING DATE  
February 4, 1999GROUP  
2634

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
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## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	AJ						
	AK						
	AL						
	AM						
	AN						

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

DH	AO	J. A. C. Bingham, "Multicarrier Modulation for Data Transmission: An Idea Whose Time Has Come", IEEE Communications Magazine, Vol. 28, May 1990, pages 5-8 and 11-14
DH	AP	B. Hiroaki, "An Orthogonally Multiplexed QAM System Using the Discrete Fourier Transform", IEEE Transactions on Communications, Vol. Com-29, No. 7, July 1981, pages 982-989
DH	AQ	L. J. Cimini, Jr., "Analysis and Simulation of a Digital Mobile Channel Using Orthogonal Frequency Division Multiplexing", IEEE Transactions on Communications, Vol. Com-33, No. 7, July 1985, pages 665-675 and Annex

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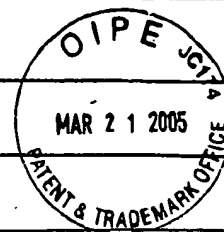
07/14/05

## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)

Date Submitted to PTO: March 21, 2005

ATTY DOCKET NO.  
00177/MU-1296/P9558-04SERIAL NO.  
09/244,037APPLICANT  
Mitsuaki OSHIMA et al.FILING DATE  
February 4, 1999GROUP  
2634

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
DH	AA	3,824,548	7-16-74	Sullivan et al.	_____	_____	_____
	AB	3,959,726	5-25-76	Hinoshita et al.	_____	_____	_____
	AC	4,303,939	12-1-81	Stephens et al.	_____	_____	_____
	AD	4,303,941	12-1-81	Marti et al.	_____	_____	_____
	AE	4,309,726	1-5-82	Tanaka et al.	_____	_____	_____
	AF	4,535,352	8-85	Haskell	_____	_____	_____
	AG	4,564,858	1-14-86	Resch	_____	_____	_____
	AH	4,581,639	4-8-86	Judge	_____	_____	_____
	AI	4,769,819	9-6-88	Matsutani et al.	_____	_____	_____
	AJ	4,794,447	12-27-88	Tsinberg	_____	_____	_____
	AK	4,800,426	1-24-89	Glenn	_____	_____	_____
	AL	4,817,192	3-28-89	Phillips et al.	_____	_____	_____
	AM	5,007,088	4-9-91	Ooi et al.	_____	_____	_____
	AN	5,029,003	7-91	Jonnalagadda	_____	_____	_____
DH	AO	5,134,464	7-28-92	Basile et al.	_____	_____	_____

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
DH	AP	3-48587	3-1-91	Japan	_____	_____	abstract

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

DH	AQ	Masafumi SAITO et al., "Bit Error Rate Characteristics of OFDM in Multipath Environment", 1991					
DH	AR	Ryutaro OHMOTO et al., "π/4-shift QPSK Subcarrier Transmission", 1991					

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DATE CONSIDERED

07/14/05

## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)

Date Submitted to PTO: March 21, 2005

ATTY DOCKET NO.  
00177/MU-1296/P9558-04SERIAL NO.  
09/244,037APPLICANT  
Mitsuaki OSHIMA et al.FILING DATE  
February 4, 1999GROUP  
2634

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
DH	AA	5,181,112	1-19-93	Citta et al.	—	—	—
	AB	5,377,051	12-27-94	Lane et al.	—	—	—
	AC	5,576,902	11-19-96	Lane et al.	—	—	—
	AD	5,214,656	5-25-93	Chung et al.	—	—	—
	AE	5,218,622	6-8-93	Fazel et al.	—	—	—
	AF	5,561,468	10-1-96	Bryan et al.	—	—	—
	AG	5,598,220	1-97	Citta et al.	—	—	—
DH	AH	5,802,241	9-1-98	Oshima	—	—	—
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## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	AJ						
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DATE CONSIDERED

07/14/05

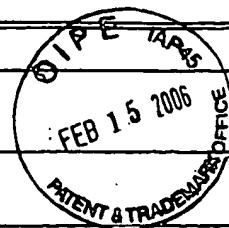


## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE  
• PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
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Date Submitted to PTO: February 15, 2006

ATTY DOCKET NO.  
00177/MU-1296/P9558-04SERIAL NO.  
09/244,037APPLICANT  
Mitsuaki OSHIMA et al.FILING DATE  
February 4, 1999GROUP  
2634

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/DH/	AA	4,267,592	5-12-81	Craiglow			
/DH/	AB	4,601,045	7-15-86	Lubarsky			
/DH/	AC	4,912,706	3-27-90	Eisenberg et al.			
/DH/	AD	4,914,655	4-3-90	Johannes et al.			
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## FOREIGN PATENT DOCUMENTS

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## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

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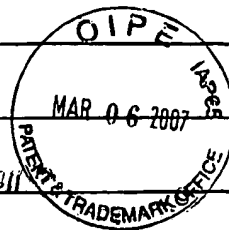
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## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)

Date Submitted to PTO: March 6, 2007

ATTY DOCKET NO.  
00177/MU-1296/P9558-04SERIAL NO.  
09/244,037APPLICANT  
Mitsuaki OSHIMA et al.FILING DATE  
February 4, 1999GROUP  
2834-211

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/DH/	AA	5,210,770	5-11-93	Rice			
/DH/	AB	5,519,730	5-21-96	Jasper et al.			
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03/19/2007